by PET/CT scan. No difference in staging was seen in 26 cases (37%). 3 cases (4%) could not be assessed because of incomplete records. In 19 out of 67 cases (28%) PET/CT scan changed the management decision from radical to palliative treatment and in 11 cases (17%) the management changed from palliative to radical treatment. Overall the difference in staging led to a change in management in 30 patients (45%). Congruent results were seen in 37 cases (55%).

Conclusion: This was a small retrospective study. However, it confirmed that PET/CT is invaluable for the correct management of NSCLC patients. This figure is consistent with current literature where 40-45% of changes in management are quoted.

P1-073 **Imaging and Staging Posters, Mon, Sept 3**

Role of PET in evaluation of lung cancer

Komurcuoglu, Berna E.[1] Gayaf, Mine[1] Korkmaz, Esra[1] Özden, Emel[1] Kumanlığolu, Kamil[2]

[1] Izmir Training And Research Hospital For Chest Disease, Izmir, Turkey [2] Ege university, Izmir, Turkey

PET is a widely used diagnostic method of nuclear radiology in the diagnosis and evaluation of malignancies. Apart from other malignancies PETespecially has an important role in diagnosis, staging and therapy of lung cancer in our daily practice. In this study we evaluated retrospectively our patients whom PET was used during their therapies.

Prediagnosis of the patients, the role of PET in disease staging, and the role of PET in therapy changes were analised. 34 patients were evaluated, consisting 30 male, 4 female. The patients median age was 55. PET, was performed to find the primery site of metastasis in 11 cases, primary tumor relaps after lung cancer surgery in 4 cases, preoperative assesement in 14 cases and for staging after neuadjuvant therapy in 5 cases. PET staging made the clinic stage up in 13 of 23 lung cancer patients and down in 4 patient. In 6 patients PET didn't change the clinic stage.

Conclusion: PET should be thought in stagingthe lung cancer patients especially who will be planned to treat with invazive therapy modalities

P1-074 **Imaging and Staging Posters, Mon, Sept 3**

Lung cancer cases detected by repeated low-dose CT screening

Kondo, Tetsuro Mori, Kiyoshi Kodama, Tetsuro

Dept. of Thoracic Disease, Tochigi Cancer Center, Utsunomiya, Japan

Purpose: To review lung cancer cases detected by repeated low-dose CT screening, and then to clarify pitfalls in interpretation and observation of repeated screenee.

Methods: From May 2000 to March 2005, asymptomatic 4,176 subjects (2,490 male and 1,686 female) underwent low-dose CT screening. A total 13 subjects were found to have lung cancer over a period of 5 years. Among them, 3 cases were repeated screenee case. These 3 cases were reviewed gender, age, smoking pack years, tumor size, histological subtype, disease stage and repeated CT images.

Results: Case one was 61 years old female with well differentiated adenocarcinoma of stage IA disease. She underwent 3 times of CT screening until diagnosed lung cancer. First time her lesion was estimated post inflammatory scar, but it was gradually grown in size. Second case was 66 years old male with small cell carcinoma of stage IIA disease. He underwent 4 times of CT screening until diagnosed lung cancer. Until second repeated CT screening, his thoracic CT images were no evidence of disease. In 3rd CT screening, he was detected small nodule in peripheral lung, but it was disappeared. In 4th CT screening, left hilar lymphadenopathy was detected. Trans-bronchial biopsy specimen proved small cell carcinoma. Third case was 58 years old male with squamous cell carcinoma of stage IIIA disease. He underwent 2 times of CT screening until diagnosed lung cancer. He was detected a nodule in first CT screening, but it was estimated decreased in size. In second CT screening, this nodule was grown in size again. First case of female was never-smoker, but second and third cases were 92 and 38 pack-years smoker, respectively.

Conclusions: Many of the lung cancers detected by low-dose CT screening were early stage disease. On the other hand, there is rapid growth case in a short period, we must remember these case can be detected by faint change in a comparative interpretation and a strict observation. Especially, nodules detected in heavy-smoking screenee must be paid attention to the faint change.

P1-075 **Imaging and Staging Posters, Mon, Sept 3**

Combined endoscopic transbronchial and transesophageal ultrasound-guided biopsy of centrally located lung tumours following a nondiagnostic bronchoscopy

Krasnik, Mark[1] Skov, Birgit G.[2] Vilman, Peter[3] Eberhardt, Ralf[4] Ernst, Armin[5] Herth, Felix[4]

[1] Gentofte University Hospital Dept. of Thoracic and Cardiovasc. Surgery, Copenhagen, Denmark [2] Gentofte University Hospital Dept. of Pathology, Copenhagen, Denmark [3] Gentofte University Hospital Dept of Surgery, Copenhagen, Denmark [4] Thoraxclinic Heidelberg, Heidelberg, Germany [5] Beth Israel Deaconess Medical Center Harvard, Boston, MA, USA

Objective: The aim of the present study was to test the use of EBUS TBNA and EUS FNA in patients with an undiagnosed solid lesion of unknown origin in the lung or mediastinum

Methods:

EBUS TBNA and EUS FNA was performed before mediastinoscopy.

52 patients prospective referred - 5 patients with a tumour in the mediastinum 47 patients with an undiagnosed tumour in the lung.

Bronchoscopy and TBNA had been performed in all patients without obtaining a diagnose.

103 lymph nodes and 5 tumours were biopsied

All the diagnosis was confrmed either by mediastinoscopy, thoracotomy/ thoracoscopy

Results:

103 lymph nodes and 5 tumours were biopsied

EBUS TBNA positive for cancer in 34 lymph nodes

EUS FNA positive for cancer in 37 lymph nodes

EUS and EBUS positive for cancer in 2 tumours

EUS and EBUS showed specific benign changes i 3 tumours

In one patient both EUS FNA and EBUS TBNA shoved benign changes and a cancer was found in a N1 lymph nodes during operation

3 biopsies were inconclusive and 32 lymph nodes biopsies showed correctly normal lymph cells

The diagnostic yield was 97% (105/108)

31 patients were diagnosed with a malignant diagnosis and 3 patients with a specific benign diagnosis

The combined procedure was diagnostic in 67% of the patients(52/67)

Conclusions: EBUS TBNA and EUS FNA is both effective and non invasive methods to obtain a diagnose in patients with lesions of unknown origin in the lungs and mediastinum

P1-076 **Imaging and Staging Posters, Mon, Sept 3**

EBUS TBNA compared to mediastinoscopy

Krasnik, Mark[1] Skov, Birgit G.[2] Eberhardt, Ralf[3] Ernst, Armin[4] Herth, Felix[3]

[1] Gentofte University Hospital dpt of Thoracic and Cardiovasc. Surgery, Copenhagen, Denmark [2] Gentofte University Hospital dpt of Pathology, Copenhagen, Denmark [3] Thoraxclinic Heidelberg, Heidelberg, Germany [4] Beth Israel Deaconess Medical Center Harvard, Boston, MA, USA

Objective: The aim of the present study was to compare the results from EBUS-TBNA with standard medi-astinoscopy in the evaluation of mediastinal lymph nodes in patients with lung cancer or undiag-nosed solid lesion in the mediastinum

Methods: The combination of EBUS TBNA and mediastinoscopy was prospective performed in 66 patients during the same general anaesthesia.

Results: A total of 66 patients (29 females and 37 males mean age 60 years) underwent EBUS TBNA and Mediastinoscopy combined.

I 61 patients (93%) EBUS TBNA the result was consistent with the final diagnose and the medi-astnoscopy was correct in 53 patients (80%). In one patient both mediastinoscopy and EBUS TBNA was false negative.

The final diagnose for the patients were 55 cancers, 1 tuberculosis. 1 lymphoma, 3 sarcoidosis and 6 inflamations.

NPV and PPV for the two methods will be discussed.

Conclusions: EBUS-TBNA is an accurate, safe and minimally invasive diagnostic technique for the staging of mediastinal lymph nodes. It's routine use for this purpose instead of mediastinoscopy should be considered

P1-077 **Imaging and Staging Posters, Mon, Sept 3**

Early prediction of response to anticancer therapy in patients with advanced/metastatic non-small cell lung cancer using FDG-PET-CT

Lee, Dae Ho[1] Kim, Seok-Ki[2] Lee, Sung Young[2] Han, Ji-Youn[2] Kim, Heung Tae[2] Lee, Jin Soo[2]

[1] Asan Medical Center, Seoul, Korea [2] National Cancer Center, Goyang, Korea

Background: Early and precise response evaluation is of great value in patients (pts) with advanced/metastatic NSCLC in order not only to reduce toxicity and additional cost by ineffective and unnecessary toxic treatment but also to get a chance to receive other possible effective treatments earlier. We conducted a prospective study to evaluate 18-fluorodeoxyglucose positron emission tomography-computed tomography (PET-CT) for early prediction of response and survival.

Methods: Between May 2004 and November 2005, 31 pts [gender, 23M, 8F; stage, 2IIIB, 29IV, histology, 6 squamous cell ca, 22 adenoca, 3 NOS; age, median 57 (30-73 yr)] with pathologically proven NSCLC stage IIIB/IV participated into this study. PET response or metabolic response was measured prospectively according to recommendations of the EORTC PET study group after one cycle of treatment. Radiologic response or best overall response was determined according to WHO response criteria every 3 cycles or when clinically indicated.

Results: Pts underwent systemic treatment with gemcitabine/vinorelbine (15), gemcitabine/cisplatin (1) gemcitabine/vinorelbine/cisplatin (1), irinotecan/cisplatin (9) or gefitinib (5). Out of 31 pts, there were 12 PRs (38.7%), 5 SDs and 14 PDs. Out of 13 progressive metabolic diseases (PMD), there were 9 PRs, 3 SDs and 1 PR, while all of 7 partial metabolic responses (PMR) were confirmed to reach PR. When increased pleural effusion identified on PET-CT was defined as PMD, there were 17 PMDs, of which there were 13 PDs, 2 SDs and 2 PR. As radiologic response was significantly correlated with time-to-progression and survival time ($p<0.001$ and $p=0.015$, respectively), early metabolic response was significantly correlated with them ($p<.0.001$ and $p=0.031$, respectively).

Conclusions: FDG-PET-CT can predict early he best response to treatment. Therefore, the early use of FDG-PET-CT can reduce side effects and costs of ineffective therapy in non-responding patients and may early predict response to new therapeutic agents. However, the patients showing equivocal metabolic response will be reassessed by subsequent response evaluation. Our study needs to be validated in a larger series.

P1-078 **Imaging and Staging Posters, Mon, Sept 3**

Lung cancer in patients younger than 40 years of age: imaging characteristics at multidetector row CT

Lim, Kun Young[1] Lee, Soo Hyun[1] Han, Ji-Youn[2] Kim, Heung Tae[2] Lee, Jin Soo[2] Zo, Jae Ill[3] Lee, Geon Kook[4] Kim, Hyae Young[1]

[1] Dept. of Radiology, National Cancer Center, Goyang, Korea [2] Dept. of Medical Oncology, National Cancer Center, Goyang, Korea [3] Dept. of Thoracic Surgery, National Cancer Center, Goyang, Korea [4] Dept. of Pathology, National Cancer Center, Goyang, Korea

Background: Lung cancer is rarely found in young patients, especially in those younger than 40 years of age. It has been suggested that the clinical features, pathologic findings, and prognosis in young patients with lung cancer differ from those in elderly patients with lung cancer. The aim of this study was to describe the CT features of lung cancer in patients under the age of 40.

Methods: We retrospectively reviewed demographic findings, histology and staging of lung cancer under the age of 40 years among 6,876 patients who were diagnosed to have primary lung cancer at our hospital during the period from 2001 to 2006. CT findings were retrospectively assessed in terms of the location (peripheral or central), shape (mass or consolidation) and size of primary tumor, presence of pleural or pericardial effusion and pleural nodules and pattern of lung metastasis [micronodular (< 5mm), macronodular (≥ 5mm), or lymphangitic metastasis].

Results: Primary lung cancer was diagnosed in 132 patients (1.9%). They were 70 men and 62 women with mean age of 34 years (range 13 - 39 years). One hundred patients (76%) had adenocarcinoma; 11 (8%), non small cell carcinoma-not otherwise specified; 9 (7%), squamous cell carcinoma; 8 (6%), small cell carcinoma; 2 (2%), adenosquamous cell carcinoma; and one each (1%), sarcomatoid carcinoma and mucoepidermoid carcinoma. At the time of diagnosis 9 (7%) had stage I, 1 (1%) stage II, 30 (23%) stage III, and 92 (70%) stage IV.

In 117 patients, 50 lesions were located in central and 67 were in peripheral. Fifteen lung cancers were consolidation type. The longest